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| 10/555,723 | 11/07/2005 | Andreas Smolarek | HEU-003USRCE2 | 2043 |

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| EXAMINER |
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ALIE, GHASSEM

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| ART UNIT | PAPER NUMBER |
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3724

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/555,723 | Applicant(s) SMOLAREK, ANDREAS | |
| | Examiner GHASSEM ALIE | Art Unit 3724 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/18/10.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Fig. 1

Claim Objections

2. Claim 2 is objected to because of the following informalities: in claim 1, lines 18-19; “one bearing cap to clamp said at least one bearing cap being between said corresponding half-mandrel” has been changed to --one bearing cap to clamp said at least one bearing cap between said corresponding half-mandrel--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 8, “at least one force-actuated detent” is confusing. It is not clear whether the force-actuated detent is the same detent recited in the independent claim 1 or it is a different detent.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hahnel et al. US 2004/0011842, hereafter Hahnel. With respect to claim 2, Hahnel discloses a device configured to perform breaking separation of at least one bearing cap 4 from a

Art Unit: 3724

corresponding thrust block in a bearing assembly an engine case provided with bearing bores 6 arranged in-line (along axis A), comprising an extension mandrel (18) insertable into at least one of said bearing bores and said extension mandrel has two half-mandrels 18.2, 18.4, an expander 26 for moving said half-mandrels apart, said expander taking effect between said half-mandrels, at least two gripping means 14a, 14b. It should be noted that the gripping means are defined by two legs of the counter mount 14 that are secured to a fixing means 14c. The fixing means is defined by the horizontal bar as shown in Fig. 1 above. Hahnel also teaches that each gripping means 14a, 14b including one or more protruding engagement members, at least one of the one or more protruding engagement members being configured to grip at recesses 22 of one half-mandrel 18.4 corresponding to the at least one bearing cap, while the other half-mandrel is moving with respect to the gripping means. See Fig. 1 above. It should be noted that the one of the protruding engagement member is defined by at least one of the jaws of the gripping means 14a, 14b that holds or retains the mandrel at recess 22. Hahnel also teaches at least one or more detents 16 extending parallel to and provided between a pair of the at least two gripping means 14a, 14b. Hahnel also teaches a fixing means 14c connected to the at least two gripping means 14a, 14b and the one or more detents 16, wherein the one or more detents contact the at least one bearing cap in a protruded position such as to apply a force to the at least one bearing cap to clamp the at least one bearing cap 4 between said corresponding half-mandrel and said fixing means, such that a unit comprising said corresponding half-mandrel, said gripping means, said fixing means and said clamped bearing cap is supported in a freely movable manner to a limited degree, though secured against rotation, in the direction of breaking separation. It should be noted that the

Art Unit: 3724

portion of the bearing cap 4 that is located above the top half mandrel 18.4 is clamped by the four middle legs and the detent 16 of the fixing means 14c and the top half mandrel 18.4. See Fig. 1 above. It should also be noted that the at least two detents 16 protrude from the fixing means 14c, since it is connected to the fixing means and protrudes downward from the fixing means in between middle legs 14. It should be noted that the claim does not specify how the detents are protruded from the fixing means.

With respect to claim 3, Hahnel discloses the device wherein said half-mandrel corresponding to said bearing cap comprises at least one recess (section 22 forms a recess) engageable with said gripping means 14a, 14b.

With respect to claim 4, Hahnel discloses the device wherein said half-mandrel corresponding to said bearing cap comprises, at its periphery on mutually facing sides, tangentially extending insertion slots (gaps formed between sections 24) for said gripping means, said slots being in communication with said at least one recess (the slots are "in communication" with the recess for actuator 26 because they are mounted on the same device)..

With respect to claim 5, Hahnel discloses the device wherein at least one recess (the final space after the furthest left raised section 24 on figure 2; between 20 and 24), when viewed in an axial direction of said extension mandrel, is positioned axially adjacent to insertion slots (any of the sections 22 can be viewed as slots as they are in between raised portions 24) in each case and merges into said slots.

With respect to claim 6, Hahnel discloses the device wherein said gripping means 14a, 14b are formed by a first and a second pincer (any of the gripping points of the gripping

means can be considered “pincers”), each of the first and second pincers comprise fixed jaws, , the jaws having, at their ends, engagement members facing towards one another.

With respect to claim 7, Hahnel discloses the device wherein said engagement members engage with at least one recess (flat portion 22 on mandrel 18; see figure 2) within said half mandrel corresponding to said bearing.

With respect to claim 8, as best understood, Hahnel discloses the device wherein said fixing means 14c connected to the gripping means comprises at least one force-actuated detent 16.

With respect to claim 10, Hahnel discloses the device wherein the engine case comprises a crankshaft case for a reciprocating piston engine. The workpiece (housing block 2 is the engine case and has the crankshaft case which is for a piston engine).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hahnel in view of any of Hahnel et al. (US 6,457,621), Hase (US 2002/0023939), or Knoll et al. (US 2002/0104864; as cited in IDS). Hahnel discloses the device of claim 8 but does not specifically disclose the setup of the gripping means (it is noted that Hahnel does not disclose a view looking through the bearing caps so it is hard to tell what the structure of the gripping means actually comprises). Hahnel does disclose the gripping means being a detent acting

Art Unit: 3724

upon said bearing cap, but does not disclose at least two detents being spaced apart from one another, said detents acting upon said bearing cap at the side which is opposite said corresponding half-mandrel. Examiner notes that in the case of bearing cap breakers, the gripping means typically comprises two detents to secure the top of the bearing cap prior to breaking. The prior art references of Knoll et al. (figure 2), Hase (figures 1 and 5), and Hahnel et al. (figure 1) all disclose the claimed setup of the gripping means in relation to a bearing cap. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device of Hahnel to have the gripper means comprise two detents per bearing case in view of the device of Knoll et al., Hase, or Hahnel et al. in order to grip the top of the bearing case. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Response to Amendment

9. Applicant's arguments with respect to claim 2 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501.

The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

Art Unit: 3724

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ghassem Alie/

Primary Examiner, Art Unit 3724

August 30, 2010